Statement Before
The National Organic Standard Board

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My name is Donald Bell and I am representing the farmer cooperative United Egg Producers (UEP), and the trade association United Egg Association (UEA). UEP is a national cooperative representing nearly 80% of the production of eggs in the United States; and United Egg Association (UEA), a national association representing 95% of the further- processed egg products. We greatly appreciate this opportunity to address the National Organic Standards Board and to provide additional comments to the National Organic Program, 7 CFR § 205.

UEP and UEA question the use of **welfare standards and the use of the term, "organic"**. interchangeably or in combination as part of a single system. Eggs produced in caged environments or from chickens roaming freely within a barn fed organic feeds without chemical additives, we believe, produce what the average consumer would perceive as "organic" products. The scientific community, in general, would also not include various management systems as part of the "organic" definition.. These comments are intended to provide scientific reasons for keeping chickens inside a confinement facility and in providing chickens a caged environment.

These comments will focus on § 205.238 "Livestock health care practice standards" and § 205.239 "Livestock living conditions."

§ 205.238 Livestock health care practice standards

(3) Establishment of appropriate housing, pasture conditions, and sanitation practices to minimize the occurrence and spread of diseases and parasites;

(4) Provision of conditions which allow for exercise, freedom of movement, and reduction of stress appropriate to the species;

(5) Performance of physical alterations as needed to promote the animal's welfare and in a manner that minimizes pain and stress.

§ 205.239 Livestock living conditions.

(a) The producer of an organic livestock operation must establish and maintain livestock living conditions which accommodate the health and natural behavior of animals, including:

> **(1) Access to the outdoors, shade, shelter, exercise areas, fresh air, and direct sunlight suitable to the species, its stage of production, the climate, and the environment;**

The provisions of 7 CFR §205 stipulate production practices, as currently interpreted, that will actually harm the chicken's welfare and thus prevent achieving the program's objectives. In addition, there are serious negative outcomes of using some of the practices associated with this form of management affecting the flock, the products produced by the flock, and the consuming public.

My participation in this hearing today is to present scientific evidence for utilizing cages and confinement housing in egg production with the aim of advancing what I believe was the government's intent in promulgating the final rules.

My involvement today follows more than 40 years of research, teaching and industry involvement. I served at the University of California-Riverside in poultry Extension and have had the opportunity to serve in many capacities with both the scientific and commercial industry communities. I've served as research editor for the Poultry Science Association, President of the Association, and as a member of the Scientific Advisory Committee on Animal Welfare for United Egg Producers.. In addition, I'm the co-author of the book "Chicken Production Manual" and am currently co-editor of the Journal of Applied Poultry Research.

Objectives of Final Organic Standards Program

7 CFR §205 refers to "Performance of physical alterations as needed to promote the animal's welfare and in a manner that minimizes pain and stress." The rule provides that "all physical alterations performed on animals in an *organic* livestock operation must be conducted **to promote the animals' welfare** and in a manner that **minimizes stress and pain**." The producer of an organic livestock operation must establish and maintain livestock living conditions for the animals under his or her care which accommodate their health.

The egg industry supports the concept of producing eggs in a manner that minimizes stress and pain. Cages have been designed to address many of the welfare issues. Egg producers also produce eggs in confinement facilities (barns) to control harmful environmental factors. To have standards that insist that chickens be given the opportunity to egress from the confinement facility would severely restrict the production of organic eggs during the winter months and would eliminate the use of cage equipment which is the principle method used to remove chickens from their own excrement.

Studies in Behavior and Measurements of Stress

Poultry husbandry has evolved over the years to optimize the well-being of the poultry flock and to improve both the production efficiency of the chicken and the economic returns to the farmer. This is the reasons that producers use cages for laying hens. Eggs produced in modern cage housing are both cleaner and safer from a "food safety" standpoint. Cages are the preferred way of housing egg-type chickens throughout the world. It is estimated that more than 95% of the table-egg flocks in the US and 75% throughout the world use the cage system for producing eggs (Bell and Weaver, 2001).

It has been shown that laying chickens do not necessarily use all the space available to them. Doyen and Zayan (1984) observed White Leghorn (WL) and Rhode Island Red (RR) laying chickens housed in pairs at densities ranging from 138-369 square inches per chicken. They found that the chickens moved further apart as cage size increased, but that the chickens did not maintain the maximum possible distance from one another.

To determine the strength of the chicken's preferences for varying amounts of space, Lagadic and Faure (1987) required chickens housed 4 per cage to peck a key to gain access to more space. Key-pecks caused one of the cage walls to move progressively outward, expanding the available space. If the chickens stopped pecking the key, the wall moved back to the original position. Chickens were willing to peck for the maximum possible space (234 square inches per chicken) only infrequently. They would work to maintain a space of 62-96 square inches/chicken.

Bognor et al. (1979) photographed White and Brown Leghorn chickens (average weight 4- lb) housed singly or in pairs and given 167 square inches per chicken of space each, and measured the space occupied during normal comfort movements including: wing-stretching, body-stretching, preening, feather-ruffling, and resting. They found that these activities required from 71 square inches per chicken (for resting) to 90 square inches per chicken (for wing stretching).

Kujiyat and Craig (1983) reported that chickens kept in colony cages in 17-bird groups were more fearful (as measured by the duration of tonic immobility) than chickens housed either singly or in 5-bird cages. Hansen (1976) found that increasing the group size was a contributor to hysteria. Outbreaks of hysteria were observed in 40 and 30-hen cages (91 and 50% of cages, respectively) and less frequent in 15 or 20-hen groups (22% for both groups combined). No hysteria was observed in 6-bird groups housed at 62 square inches per chicken, even though these groups were housed at slightly higher densities than chickens in the larger groups. This research demonstrates that aggression may increase with increased space allowances.

The effects of space on *corticosterone* levels have been examined in several studies. Craig, et al.,. (1986) found that Leghorn chickens from two selected strains housed in 6-bird groups had higher corticosterone levels than chickens in a single-hen cage or in 4-chicken cages. Mortality was also higher in the 6-chicken cages than in the 4-chicken cages.

Cunningham et al. (1988) found that heart weights (an index of adreno-sympathetic activation) were increased in hens housed at density of 316 versus 406 square centimeters per chicken.

In keeping with the requirements that "The producer of an organic livestock operation must establish and maintain livestock living conditions which accommodate the health and natural behavior of animals," caged environments for laying chickens certainly do accommodate the health and to a lesser degree, the natural behavior of chickens.

Parasites in Natural Environments

The producer seeking to comply with the **National Organic Standards Program** must "*establish appropriate housing, pasture conditions, and sanitation practices to minimize the occurrence and spread of diseases and parasites*". Access to the outdoors and ground conditions will actually increase the spread of disease and parasites. Ectoparasites and disease pathogens are found in animal agriculture environments that cause stresses to chickens. Coccidiosis, a disease usually occurring among chickens kept on litter, is totally eliminated in caged environments (Engstrom and Schaller, 1993). Meat chickens, which are kept of the ground exclusively, still suffer from this dreaded disease as well as from other litter-associated conditions. Today's modern production systems call for housing chickens in cages to physically remove the chicken from living in their own feces and from coming into contact with these life-threatening pathogens and ectoparasites. This reduces the stresses experienced by chickens and greatly reduces the use of preventative medications.

To meet the goals of **7 CFR § 205.238 (3)** that "*Establishment of appropriate housing, pasture conditions, and sanitation practices to minimize the occurrence and spread of diseases and parasites,*" caged environments more successfully address these issue and as a result, laying chickens are more healthful and the spread of disease and parasites is minimized.

Natural Predation

Other stresses in outdoor environments include natural predation. Domesticated poultry in free-ranging environments are easy prey for vermin such as flying predators, including hawks or owls, along with other predators, including coyotes, skunks, foxes, raccoons, and weasels.

7 CFR § 205.238 (4) says that "*Provision of conditions which allow for exercise, freedom of movement, and reduction of stress appropriate to the species,*" Chickens confined in floor management systems are provided with these housing conditions. Caged environments are managed to reduce and to eliminate many of the associated stresses seen in free-roaming systems.

Inclement Weather

7 CFR §205.239 requires "**(4)** *Shelter designed to allow for: (i) Natural maintenance, comfort behaviors, and opportunity to exercise; (ii) Temperature level, ventilation, and air circulation suitable to the species, temperature extremes, wet weather and other natural elements such as snow and ice that will increase mortality among domesticated poultry.* Producing "organic" eggs in more northerly states will cease during the winter months under the final rule. The rule will create a regionally discriminatory effect favoring one region at the expense of another. 7 CFR §205 will decrease the availability of "organic" eggs during the winter months and increase the cost of "organic eggs" everywhere by displacing available supplies in more moderate climates.

Temporary confinement provisions were outlined in **7 CFR § 205.239 (b)** *"The producer of an organic livestock operation may provide temporary confinement for an animal because of:*

(1) Inclement weather;
(2) The animal's stage of production;
(3) Conditions under which the health, safety, or well being."

UEP and UEA believe the regulations should be interpreted to consider the winter months in colder regions as conditions under which the health, safety, or well-being would justify confinement rearing of chickens and be consistent with the stated objectives of 7 CFR § 205.239 (a) that *"The producer of an organic livestock operation must establish and maintain livestock living conditions which* ***accommodate the health*** *and natural behavior of animals, including: (1) Access to the outdoors, shade, shelter, exercise areas, fresh air, and direct sunlight* ***suitable to*** *the species, its stage of production,* ***the climate, and the environment***. Access to the outdoors can be achieved in poultry confinement housing designed with open-sided curtains. Weather permitting, the curtain sidewalls can be opoened to allow fresh air and direct sunlight.

Pecking Order

In an environment without cages or borders, chickens are naturally inclined to establish a *pecking order*. This increases the stress and often increases mortality. R. Tauson (1998) reported that as the average flock size of chickens became considerably larger, outbreaks of cannibalism also turned out to be a problem. Reducing the size of chickens interacting through the use of cages also reduced the incidence of cannibalism (Hilbrich, 1985; Hansen, 1993; Abrahamsson and Tauson, 1995).

7 CFR § 205.238 provides for *"(3) Establishment of appropriate housing, pasture conditions, and sanitation practices to minimize the occurrence and spread of diseases and parasites; (4) Provision of conditions which allow for exercise, freedom of movement, and reduction of stress appropriate to the species*. The natural pecking among poultry can be reduced in a caged environment and with light management programs which are not possible with free-ranged flocks.

Disease Concern

Wild birds and waterfowl are known carriers of the disease *Avian Influenza* (AI). Exposure to the outdoors will increase the likelihood of chickens contracting this disease. In the 1980's, the poultry industry in Pennsylvania experienced devastation to its poultry flocks as a result of exposure to AI-infected ducks and geese. Millions of dollars were spent to destroy flocks of chickens and turkeys exposed to this disease. Gay, J.M., et. al. and Hogue, A. et. al. reported *Salmonella Typhimurium* in a broad range of species including wild birds.

7 **CFR § 205.238** provides for "*(3) Establishment of appropriate housing, pasture conditions, and sanitation practices to minimize the occurrence and spread of diseases and parasites*, confinement rearing of laying chickens will reduce the spread of diseases."

Conclusion

Modern egg production practices have resulted from a growing demand for economically produced eggs while providing an environment for the chicken that minimizes disease and the harmful effects of inclement weather, predators and cannibalism. Annual mortality, once hovering around 40%, is now around 6%. Modern egg production practices reduce the stresses previously common with older methods of management. The final rule may unintentionally decrease the welfare of the chicken as discarded practices of the past are re-introduced. The European poultry industry has seen a re-apperarance of many diseases and parasites as they've moved away from the traditional cage systems and back to the systems used at the turn of the century.

We hope that the National Organic Standards Board, in working to promote ***appropriate housing, pasture conditions, and sanitation practices to minimize the occurrence and spread of diseases and parasites***, will consider the housing of chickens as an important element in animal care.. Eggs produced from *organic* farms, feeding organic feed, and abiding by the objectives of the National Organic Standards Program should include those farm facilities where the curtain sidewalls can be opened and can provide sunlight and "access to the outdoors" without jeopardizing the welfare of the chicken.

UEP and UEA suggest labeling organic eggs incorporating these recommendations:

- cage free-organic
- cage-organic

This would provide consumers both the choice and clearly define the product.

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